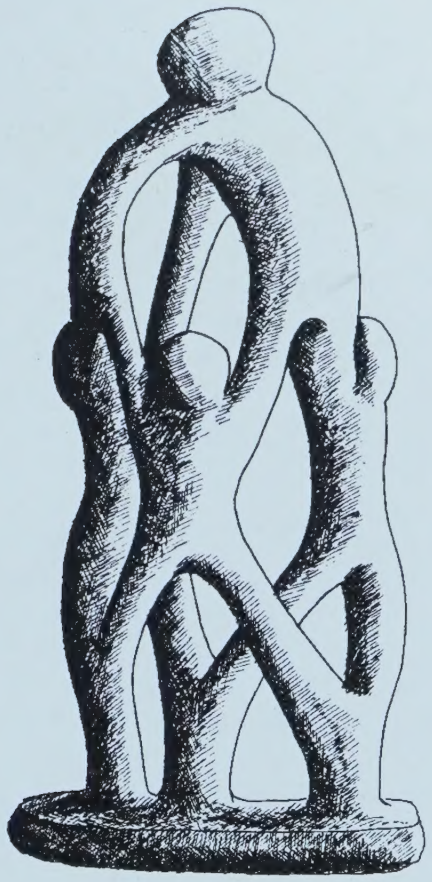

Perception of physiotherapy profession by physiotherapists in Tamilnadu, India

Karthikeyan Kandasamy

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Karthikeyan Kandasamy
Umeå International School of Public Health
Epidemiology and Global Health
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Specialisation: Health systems
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Karthikeyan Kandasamy

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Supervisor: Klas-Göran Sahlen

Abstract:

Introduction: The physiotherapy service gained its importance in developed nations which is offered through primary health centers and funded by the public health system after having understood the need of this service in prevention, promotion, curative and rehabilitation of health for the individual and population. Hence the profession has a good development and the scope is growing each year. But, there is not equal importance given to physiotherapy service and its profession in developing world and there is no research done to know how physiotherapy profession fares in Tamilnadu, India. This study focuses on exploring the views, perception and experience of Tamilnadu physiotherapists to understand 'how the physiotherapy profession fares in Tamilnadu, India?'

Methodology: Qualitative methodology is used for the study and In-depth interviews of five physiotherapists were conducted to explore the physiotherapy profession in Tamilnadu. Grounded theory and symbolic interactionism were the theories used for the study which guided the research process.

Main Findings: The model created from the subjective reality of informant's (physiotherapists) about the physiotherapy profession in Tamilnadu shows two core categories: *demotivating rewards and worst career opportunities* & *knowledge deficit* which led to the current situation of *worsening physiotherapy profession* in Tamilnadu, India.

Conclusion: The findings of the study clearly imply the need for forming physiotherapy council both at central level and Tamilnadu state government level. With the growing scope of physiotherapy profession throughout developed nations and the enormous benefits it provides from promotion, prevention, curative and rehabilitation services, the people of Tamilnadu should be provided physiotherapy service for improved health outcomes by the government of Tamilnadu and India through improving the profession's standard from the present worsening state.

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Abbreviations:

HOD- Head of department

MBBS- Bachelor of Medicine, Bachelor of Surgery

PT-Physiotherapy

PTP-Physiotherapy Profession

PT'S-Physiotherapists

PTS-Physiotherapy Service

PG-Post Graduation

TN-Tamil Nadu

UG-Under Graduation

WCPT- World Confederation of Physical Therapy

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1. Introduction:

A profession is a vocation obtained through education in a college or university which gives identification, shares common values and do services for public good by also having responsibility for knowledge development and research. Usually profession belongs to a national organization (1). Professionals are the people who practice specialized knowledge in the field for a fee (2). Health professionals or providers are the one who deliver health care service through preventive, promotive, curative and rehabilitative activities for individuals and community(3). All the health profession has to function optimally for the effective functioning of health system of a country (3). My study aims to look in to physiotherapy profession in Tamilnadu which is of significance in promotion, prevention, curative and rehabilitation service to bring good health outcome as a whole under the health systems in Tamilnadu (4). Physiotherapy was my background in under-graduation education and it was during my under-graduation I saw a good growth in profession despite considerable obstacles were present. I left Tamilnadu after completion for a job in a foreign land for four years. My knowledge in public health now has given me a new perspective of old obstacles seen in physiotherapy field and was keen on looking for the current situation in physiotherapy. Then I looked for articles on the current situation of physiotherapy profession in Tamilnadu and I found no articles. There was little news about physiotherapy available in news papers only. They are, the physiotherapists demanding for government job in hospitals and primary health centers claiming the need of 6500 physiotherapists in government hospitals whereas only 160 were working by 2010 and the last employment occurred in 1995. They also told to the media that 20000 physiotherapist presently giving service to 150000 people everyday majority in urban areas in Tamilnadu and claimed that physiotherapy services are not offered in the rural areas. Physiotherapists verbally condemned few doctors calling them quacks for using the doctor prefix and they denied prescribing drugs by physiotherapists (5). There was another case where physiotherapists demanding government for the use of "Dr" prefix and it was denied in 2009 (6). Physiotherapy students in trichy district 'Government College' went on fasting in 2011 demanding the government to recruit professors, associate professors and lectures for their educational institution which should be 20 people according to government norms but only 3 tutors was recruited who were teaching in the college. They also demanded for an internship stipend similar to the provision of stipend for medicine and dentistry internship, opening masters programme in physiotherapy in the government colleges, recruiting more physiotherapist in government hospitals, emphasizing the need to recruit physiotherapists in primary health centers and recruiting a physiotherapist as a principal in government colleges rather physicians (7).

The above informations made me interested to look into the physiotherapy profession's current condition in Tamilnadu, India. With no delay, I would like to introduce the readers of this study with background information on physiotherapy profession, state profile of Tamilnadu and health system in Tamilnadu which will be followed by the research methodology and results of this study.

1.1 What is physiotherapy?

Physiotherapy (PT) is a health care profession carried out by physiotherapists whom through their examination, evaluation, diagnosis and physical intervention skills works on healing of impairments and disabilities and also helps in promoting the ambulation, functional abilities, quality of life and movement. Physiotherapy profession also commonly known as physical therapy and similarly physiotherapist also commonly known as physical therapist (8).The definition of the physiotherapy profession is necessary to describe the scope of the practice and also to define the physiotherapist's role. The definition differs in different countries (4).

It is worthy to look in to the definition set by the international physiotherapy professional association called as the 'World Confederation of Physical Therapy' (WCPT) which regulates physiotherapy profession by setting the standard of the profession worldwide working in collaboration with national, regional and state level physiotherapy associations which works with the same motive (9).

Definition of physiotherapy by WCPT is

"Physical therapy provides services to individuals and populations to develop maintain and restore maximum movement and functional ability throughout the lifespan. This includes providing services in circumstances where movement and function are threatened by ageing, injury, diseases, disorders, conditions or environmental factors. Functional movement is central to what it means to be healthy. Physical therapy is concerned with identifying and maximizing quality of life and movement potential within the spheres of promotion, prevention, treatment/intervention, habilitation and rehabilitation. This encompasses physical, psychological, emotional, and social wellbeing. Physical therapy involves the interaction between the physical therapist, patients/clients, other health professionals, families, care givers and communities in a process where movement potential is assessed and goals are agreed upon, using knowledge and skills unique to physical therapists". (4)

1.2 Who is a physiotherapist?

WCPT also defined physiotherapist to be a qualified professional who do a comprehensive assessment of clients and make evaluation about the clinical condition thereby deciding for a diagnosis, prognosis and plan. They also provide intervention and determine outcome for the clients which is followed by suggestions for self-management where necessary. The physiotherapist thus who provides consultations also determine which clients to be referred to other health care professionals. WCPT also claims the extensive knowledge of physiotherapists not only limit them to client care but also make them eligible in public health strategies, advocacy, supervision, delegation, leadership, management, teaching, research and development & implementation of policies at all levels. Despite the definition, WCPT clearly mentioned the clinical practice of physiotherapist differ according to the social, economic, cultural and political contexts of the country and hence the education also, but the curriculum for the first physiotherapy education which gives the title physiotherapist will always meet the standard set by WCPT (4).

1.3 What are the modes of interventions in physiotherapy?

The modes of interventions in physiotherapy are

- *Therapeutic exercises:* These are planned physical movements, postures and activities to prevent impairments, promote function, reduce risk, optimize overall health and improve fitness and well-being (4, 10).
- *Electrotherapy:* Electrotherapy is using the electrical energy for treatment of medical conditions. Here electrical forces are applied to the body to bring physiological changes to cure medical conditions (4, 11).
- *Airway clearance techniques:* It involves clearing the airway for an improved breathing. Techniques like postural drainage, deep breathing exercises, spinal mobilization, vigorous chest massage, suctioning, positioning etc are used to increase the lung capacity, reduction in breathlessness etc (4, 12).
- *Manual therapy techniques*: These are hands on techniques like manipulation and mobilization for assessment and treatment of joint structure and soft tissues (4, 13).
- *Physical agents and mechanical modalities:* Physical agents are different forms of energy and materials used for therapeutic purpose by applying over the body. These include heat and cold. Mechanical modalities are used to apply mechanical force which can increase or decrease pressure in the body (4, 14).

- *Training in self care* (4).
- *Prescription and application of mobility aids* like wheel chair, crutches, canes, walker and assistive devices like orthotics and prosthetics (4).
- *Instructions related to patient problem* like ergonomics etc (4).
- *Therapeutic massage*: Massage means to press gently. Therapeutic massage provides pain relief to soft tissues, decrease muscle tone, improve lymphatic drainage and induce relaxation (physical &mental) to the body (4, 15).

1.4 Physiotherapy education:

The education for physiotherapy differs from country to country and even from state to state within a country. Remembering the physiotherapy practiced in relevance to social, economic, cultural and political contexts of a country in the definition of physiotherapy and hence the education also differs accordingly. The education is offered in Bachelor's, Master's and Doctorate level (8). The duration for bachelors level is 3 to 5 years plus 6months to one year internship, whereas for master level it is 1 to3 years which varies with countries and the doctor of physical therapy is for 3 to 4 years + 9 to 36 months internship which is offered in US, Pakistan and in some parts of UK (8,18, 19).

WCPT recommends all nations that the physiotherapy curriculum of the first level education to ensure the knowledge, skills and attributes to meet the guidelines made by them and prepare physical therapist to be independent practitioners that may work well in collaboration with other health care professionals in the team (4).

1.5 Specialization in physiotherapy:

The extensive knowledge in physiotherapy and the broad scope of physiotherapy paved the way of much specialization within the physiotherapy profession. The specializations which are registered in American board of physiotherapy are (8, 50)

Orthopedic physiotherapist: They diagnose, plan & treat disorders and injuries of musculoskeletal system. They have their specialized role in the out-patient department in hospitals and clinics (8, 50).

Neurologic physiotherapist: They are specialized in treating patients with neurological disorders majority are brain injuries, stroke, cerebral palsy, multiple sclerosis, Parkinson's disease, spinal cord injury and Alzheimer's disease to name a few (8, 50).

Cardiovascular and pulmonary physiotherapist: They treat individuals with cardiopulmonary disorders and post-cardiac or post- pulmonary surgery patients to improve

their endurance and functional independence through clearing lung secretions and breathing exercises (8, 50).

Geriatric physiotherapist: They treat a broad range of ageing disorders or diseases such as arthritis, osteoporosis, cancer, balance disorders, incontinence, Alzheimer's disease and hip & joint replacements (8, 50).

Pediatric physiotherapist: They treat infants, children and adolescents with diseases which are congenital, developmental, neuromuscular, skeletal and other acquired diseases (8, 50).

Sports physiotherapist: They play an important role with sports person by working on prevention, education, acute cure, treatment and rehabilitation of sports injuries (8, 50).

Women's health physiotherapist: They work on women's health during prenatal and postnatal periods in addition to treating conditions like lymph edema, osteoporosis, pelvic pain and urinary incontinence (8, 50).

Clinical Electro physiology therapist: Their mode of treatment is through electrotherapy and physical agents commonly for peripheral nerve disorders, central nerve disorders, wound management and musculoskeletal pains (8, 50).

1.6 Physiotherapy practice throughout world:

Physiotherapy practice and profession throughout the world depends upon the variations in culture, health systems and population of a country. Any health service is usually influenced by the factors such as cost constraints, ageing populations, advancement in technology, improved health outcome desires and consumer knowledge & expectations. Accordingly, physiotherapy has learned to work in the competitive market and with the changing local contexts by working in collaboration with other professionals in the health care team and showed their ability to interact with broad range of clients and colleagues in various set up within the changing context in political and institutional environment (9).

The practice of physiotherapy is similar in European regions guided by the European region of the World Confederation of Physical Therapy while it differs for regions like Africa and Asia-west pacific. The variation between the regions is influenced by the organization and funding of health care system and also the development & profile of physiotherapy profession itself. The percentage of GDP expenditure on health is high in developed nations and it is due to this reason physiotherapy integrated under the health care system of those nations and the cost of physiotherapy offered by public health systems or by health insurance system or by out-of-

pocket payment which is affordable for developed nation citizens. The scope of practice for physiotherapy also depends upon total number of physiotherapist and also the physiotherapist to population ratio. The scope is very good in developed nation like Australia where there are 1:1750 whereas poor in countries like Ethiopia with only 16 physiotherapists available for 60 million people in 1996 (9).

The profession is developed well over the years in the developed nations and got its identity mainly from the world wars and polio epidemic. In developing nations, the profession was introduced through western funded and western-run organizations for the reason of rehabilitation for people with disability and patients with pain in developing nation. Physiotherapy education was shaped according to health-care needs, war and catastrophe in the developing countries by external physiotherapists rather than the profession shaped by historical events and culture in developed nations. But now physiotherapy education and development is influenced by the country's contexts and is suggested more valuable than promoting mobility and giving pain relief. The recognition of physiotherapy service is good in few developing nations as physiotherapy councils were established to monitor physiotherapist and provide professional development but challenges also prevails in the developing nations and it is different for different developing nations (20).

1.7 Important professional issue for physiotherapists:

WCPT strongly state that physiotherapists are independent practitioners who is able to work as first contact health care professionals and this means the people can directly seek them without being referred from other health care professionals. It is through this model of direct access of physiotherapy service, the autonomy of the service users will be maintained in addition to ensuring the autonomous status of the physiotherapists whose first education have equipped them with sufficient skills to be a first contact professional. WCPT encourage all nations to adopt it in their countries health care service and claims that physiotherapist actions and decisions should not be controlled or compromised by employers, other health care professionals or individuals (4).

There are two arguments against this direct access. The first argument is that users are at risk without referral from physicians and the second argument is there would be increased use of referral service without physician referral (21). In response, researchers support this direct access to physiotherapy service in those countries explaining their acceptability among serviced users and cost-effectiveness of direct access (4). Also researchers found that those who were

self-referred had short duration of symptoms than those who were referred by third party (21). It was seen that in many health care delivery system, service users don't need a referral for access to physiotherapy service and this was made possible by the legislations formed at national, provincial, regional and state level in addition to the standard of practice by physiotherapists (4). Many developed nations made this possible such as Australia, 45 states of America, Netherlands, Denmark, Canada, South Africa etc (22). But in developing countries physiotherapists are not given a direct access.

1.8 Tamilnadu in India:

Tamilnadu, which lies on the southernmost part of Indian peninsula is one of the 28 states in India. It is the seventh most populous state and in area, it is the eleventh largest state of India (23). It ranked tenth in the human development index and sixteenth in the gender development index for India in 2006 (24). Chennai is the capital city of Tamilnadu which is one of the four metropolitan cities of India. The state Tamilnadu has a high employment rate stands second in the Indian table for employment because of presence of many business enterprises in the state. It consists of 32 districts and it is one of the most urbanized states in India. The Tamilnadu nominal Gross Domestic Product was estimated at US$ 97.970 Billion (India's $ 1.834 trillion). The growth rate estimated in 2007-2008 was 12.1% and ranked third largest economy of India. The nominal per capita income in 2009 was estimated to be US$ 1,651 which is above the per capita income of India which is US$ 1,527 (23, 25, 26).

Table 1. Health related indicators of Tamilnadu and India.

Indicators	Tamilnadu	India
Population (2011)	72 million	1.21 billion
Decadal growth rate (2001-2011)	15.60%	17.64%
Total fertility rate(2008)	1.7	2.6
Population density (per sq.km) (2011)	555	382
Sex ratio (females per 1000 males) (2011)	995	940
Literacy rate (2011)	80.33% (Male-86.81%, Female-73.86%)	74.04% (Male- 82.14%, Female-65.46%)
Life expectancy at birth (2011)	66.2	63.5, Male-62.6, Female-

		64.2
Maternal mortality ratio/1,00,000(04-06)	111	254
Infant mortality rate/ 1000(2008)	31	53
Population below poverty line(2001)	21.12%	26.10%

(27, 28, 29, 30).

It can be seen the state performing well when compared to overall health indicators of India but still have more than 20% of people below poverty line and estimated as one of the 12 states in India having alarming hunger state by global hunger index in 2008 (23).

In 2010, the health secretary told media that the infant and mortality rate was 11 cases per year in Tamilnadu, Andhra Pradesh and Kerala while it was 500 plus cases per year for states like Orissa, Uttar Pradesh, Bihar, Madhya Pradesh and Jharkhand. This little number of cases on maternal and infant mortality makes Tamilnadu comparable to developed nations said by the health minister of India (31, 32).

1.9 Health system: organization:

The health system of Tamilnadu is the same as the health system of India. Health care in India is delivered through mixed groups who are public health sector and private health sector. The private health sector is the dominant health sector throughout India. The health service is delivered in many types such as Ayurvedic, Unani, Sidhha, and Homeopathy which are traditional medicines and the majority being western allopathic (33).

1.9.1 Public health sector:

This sector is governed at the central level by 'Ministry of Health and Family Welfare, India' and at the state level by the 'State ministry of Health and Family Welfare'. At the state level the administrative wing is headed by secretary of health and the technical wing consists of civil servants and medical doctors. At the district level, there is a chief medical officer/ district health officer who take care of the non-hospital functions and the district medical superintendent takes responsibility of district hospital functions. The municipalities and small towns have similar type of hierarchy (33).

The health care service is usually delivered through public teaching hospitals; non-teaching hospitals such as district hospitals, civil hospitals, cottage hospitals, rural hospitals, peripheral

hospitals and some specialty hospitals which only deliver service for specific diseases such as leprosy, tuberculosis, mental illness and maternity homes. The hospital type is different for different places. Cities have few state run hospitals, local body hospitals and dispensaries. At districts, the capital usually is a big town; they have civil general hospital which on average is 150 bedded. Small towns and large villages of any district consist of few small hospitals and dispensaries. At rural areas there are three centers namely community health center, primary health center and sub center to deliver the primary health service. Community health centers present for every 100,000 population which is 30 bedded multi-functional centers consists of 4 specialists, 3 medical officers and other paramedical staffs. Primary health centers available for every 30,000 rural population which is a 6 bedded center consists of 3 medical officers, one physician in every traditional medicine, midwives, nurses, a laboratory technician, a computer/statistician, driver, a male and female health assistant with no physiotherapist. Sub centers available for every 5000 population at very remote areas (33).

1.9.2 Private health sector:

This sector consists of not for profit and profit sectors. The non- profit sector consists of non-governmental organizations, missions, charity organizations, trusts etc. The profit sector of private health consists of institutions and many types of practitioners. The profit sector delivers service through small and big hospitals, clinics, polyclinics, dispensaries, physiotherapy clinics, diagnostic centers, medical centers and medical colleges. Health service is majorly delivered through the profit sector whose number of institutions exceeds the public sector organizations. There are numerous nursing homes and outpatient clinics that deliver the health service in profit sector. Among non-profit it is the NGO which are more in number and they are growing over the years in their service delivery but are very minimal compared to the profit sectors. In addition there is informal health sector, a sector where health is delivered by people without professional qualification and they are faith healers, local medicine person, priests, traditional birth attendants and quacks (33).

There are regulations for health care professionals such as doctors with all specializations and for doctors in all types of medicine, dentists, pharmacists and nurses both at the central and state level which are called councils to award a license to enter the market and also for professional development. There are no councils present for physiotherapists, occupational therapists, laboratory workers and other medical professionals to regulate and provide growth to the profession and professionals (33).

1.9.3 Health financing in India and Tamilnadu:

The total health expenditure of India is around 5% GDP in 2009 where the per capita health spending is US$ 40 but the government's health expenditure in India (which is tax-funded) is 1% of GDP which is a spending of US$8 per capita which is very low in relevance to the need. The private health sector delivers majority of health service in the country resulting in 90% out of pocket expenditure, imposing huge burden on low-income households (34). This means those who are poor have to look for the governmental service which is often poor quality because of poor financing and increased demand for service. Private hospitals' which dominates health services also dominates the quality in delivering services. The richer a person is, the higher is the quality of service received is and thus it is the amount of user fee that determines the quality in private sector (35).

When looking in to health financing in the past, the 'National Health Accounts' for India in 2001-2002 estimated the household expenditure to be 69%, state contribution for health as 14.4%, local contribution as 2% and central contribution for health as 7.2%. The contribution of health expenditure from non-profit was 0.3% and 2% from external donors. All these clearly show the low spending from government (36). Even this low spending decreased from the state and central government until 2005 from 2001 and in 2005 the government of India committed to spend more through 'National Rural Health Mission' for some vertical programs to achieve the millennium developmental goals. The Tamilnadu state government too shown commitment to improve health by spending more for health and their spending for 2005-2006 was 330,327,563 USD and for 2006-2007 it was 363,725,004 USD before which there was a negative growth in state spending from the government (36, 37). The states per capita health expenditure increased from 4.85 USD in 2005-2006 to 7.15 USD in 2007-2008 with both central and state governments involvement which still is low compared to WHO recommendations (38). The state government on November 2011 has implemented a new insurance scheme to support the out-of-pocket payment for low-income households (below 1,382 USD annually) by paying a minimum of 1,920USD for one family and a maximum of 2,879 USD each year for four years and this scheme will benefit 13.4 million families which will include 1,016 treatments, 113 follow-ups and 23 diagnostic procedures (39). The information on new health insurance scheme criteria is not available and it is not known that the insurance allows a person to afford physiotherapy service.

1.10 Physiotherapy in Tamilnadu, India:

There is no history available on when and how physiotherapy got in to practice in India and in Tamilnadu. The physiotherapy education is offered at universities and colleges as a 4 and half years programme (including 6 months internship) at the bachelor level and the entry level minimum qualification is a pass (35%) in high school whereas it was more than 50% before some years. There are two types of universities. They are state government universities named as 'The Tamil Nadu Dr. MGR Medical University' and private universities. The government university has 46 colleges (2 government and 44 private colleges) affiliated under it and there are many deemed universities. The number of intakes in these colleges is 25 for government colleges and 50 for private colleges and universities. At the master level a 2 year physiotherapy programme is offered in the 19 private colleges affiliated by government universities and also in deemed universities. The number of intakes for master programme range from 8 to 24 seats in private colleges affiliated by government universities. The specialization offered at masters level are orthopedics, neurology, cardio-pulmonary disease, sports physiotherapy, pediatric neurology, hand conditions, community physiotherapy, physiotherapy in obstetrics and gynecology. There is no 'doctor in physiotherapy' programme available in Tamilnadu. (40, Key informant)

Physiotherapists work in government and private hospitals, private nursing homes, private clinics, private fitness centers, charities, NGO's, government's community based rehabilitation programme, government and private colleges and do private home practice. (key informant)

2. Objectives:

The main aim of the study is to explore the perceptions, views, experiences of physiotherapists about the physiotherapy profession in Tamilnadu, India and make necessary suggestions to the government of Tamilnadu and India from the findings. The research question concentrates on what physiotherapists in Tamilnadu perceive about their profession? / How the physiotherapy profession fares in Tamilnadu?

3. Methodology:

Qualitative research methodology was used for the study as it is best suited methodology to explore physiotherapy field in Tamilnadu when there was no research done in the past. It was useful to bring information from the field as a priori which then can be used for qualitative and quantitative research in the future. In-depth interviews are the best suitable data collection method when the aim is to explore the perceptions of informants. Also in-depth interviews serve as main material for grounded theory which was the reason for selecting interviews for the data collection in this study (41).

3.1 Theoretical Framework:

Symbolic interactionism and grounded theory approach is used in the study. The grounded theory approach has its roots in the symbolic interactionism theory (41).

3.1.1 Grounded theory:

Grounded theory is a qualitative research design intended to discover new things or to discover theories. It is suitable to be used when the study is aimed to use participants' experiences to explain the process or practice or actions with the development of theory which is grounded in the data for necessary implications (41, 42).

As the name itself says, a theory is formed that is grounded in the data and not formed based on the pre-understanding either from theories available in the existing literatures or the experience the researcher poses in the research area. The grounded theory always starts with data collection guided by the theoretical sampling. As soon as the data is collected from first participant, the researcher starts to code the data and thus the data collection and analysis goes together. The formation of codes, categories and model guides the researcher in selecting the next sample for the study. Thus the formation of theory guides what information to collect and from whom. The saturation in information in grounded theory is determined by the saturation of the important (central) categories than the saturation of peripheral codes (16, 17)

The data analysis takes place in a step wise systematic manner which usually starts with coding the data. Coding, gives abstract meaning to incidents in the data collected. This is followed by constant comparison of codes where similar codes develop a common name or category. Comparing is very critical in grounded theory in the formation of conceptual categories. Writing memos starts from this stage of analysis which is of importance in addition to writing memos in

the field during data collection. Categories which are formed by contrasting one incident (code) with other incident (code) forms the important stage in analysis. Categories are being indicated by the data rather not regarded as representation of the data collected. Categories thus provides meaningful picture at a higher level of abstraction of the data. These categories are also compared to look whether there is possibility to merge in to single category. It again remembers the constant comparison method, a critical method throughout the data analysis in grounded theory. Thus a researcher has to make sure the differences and similarities among and between the categories formed. Finally, the analysis involves in forming hypothesis or relationship between the categories that is actually grounded in the data by looking back to the codes and constant comparison of categories. This involves the formation of core category (central category) and other categories and the relationship between them ending in the construction of a theory (16, 17)

The ambition of grounded theory which is to create new theories has its deep roots in the symbolic interactionism (41).

3.1.2 Symbolic interactionism:

Symbolic interactionism is a sociological theory which looks in to the micro social interaction in order to give subjective meaning to the human behavior and social process (43). This approach gives importance to subjective meaning for the purpose that that people behavior is influenced by what they believe rather than what objectively is true (44).

Herbert Blumer, an American sociologist in his article gives three basic points on symbolic interactionism which are

- "Humans act toward things on the basis of the meanings they ascribe to those things."
- "The meaning of such things is derived from, or arises out of, the social interaction that one has with others and the society."
- "These meanings are handled in, and modified through, an interpretative process used by the person in dealing with the things he/she encounters" (45).

This approach is also helpful to construct theory through looking in to the frame of society, a result of human social interaction (43).

As the researchers aim was to construct theory from the subjective meaning of the physiotherapist's behavior and social process that they have constructed and interpreted in their

professional world, grounded theory view was taken as point of departure for this study (41, 42). Considering the suitability of grounded theory for my study aim, the research process of data collection, data analysis and interpretation of findings of this thesis study carried out in line with guidelines of grounded theory.

The view of social construction of reality in symbolic interactionism theory states that "people in interplay create society and that our perception of this society is constructed" which is also the case in science. Hence science is never completely objective or not uncontestable. It also states that truth is relative and which when constructed in the research process will be subjected to different opinions. In order to avoid fallacies in the formation of a concrete model, the researcher have created the model that was grounded in the data by being neutral to the data achieved and by going through the data many times in addition to constant comparison of the data. It was agreed by the researcher that the model can be open to alternative and changing interpretations (41).

3.2 Locating myself - an insider and outsider perspective:

I have completed my under graduation in physiotherapy from Tamilnadu, India between 2001 and 2006. Immediately after my completion I went to Nepal for a job where I had worked for nearly four years. Considering am born and grown in Tamilnadu and had completed physiotherapy in Tamilnadu, I locate myself as an insider having some knowledge of how the profession was from a student's perspective but not from a professional perspective. Pre-understanding of the knowledge is considered to be a disadvantage in qualitative researches and it is for this reason I 'killed my darlings' which I have discussed in detail in the discussions. (41)

I am pursuing masters in public health and the public health perspective of looking in to my research question is very new to me. Also I don't have any work experience as a physiotherapist in Tamilnadu after my under graduation. So, I locate myself as an outsider. The public health perspectives of looking in to the research question with the lens such as *health systems* (organization & financing with regard to service demand and government service delivery), *market failures in health system* (Asymmetry of information and supplier induced demand) & p*olicies and regulations in health care* (Formation of professional councils for regulation of professionals ethics, workforce planning, reward regulations, research, regulation of training institutes and service awareness among the people) have shaped my understanding of the phenomenon to new levels which helped me structure a comprehensive interview guide, data collection and data analysis.

3.3 Methods

3.3.1 Sampling and recruitment of participants:

Purposive sampling technique was used for the research which was considered as the theoretical representation of the physiotherapy population (41). The minimum criterion for participant selection was at least 6 months experience in that particular work sector as physiotherapist. The participants were reached through the help of my friends who are physiotherapists. I ensured a variation in selection of participants through the institutions they graduated (government and private educational institutions of government university and deemed university), type of work sector (government hospitals, private hospitals, private clinic and home practice, fitness center and a participant who left physiotherapy profession), gender and geography (limited coverage as only 5 participants interviewed which was feasible for master thesis study). Totally six participants were interviewed through computer assisted telephone. The number of participants was not predetermined. It was an emergent design guided by grounded theory. This means the indications of clear pattern grounded in the data helped to achieve the saturation (41). With the first three interviews theoretical concepts were seen. But still interviews were carried out to look for any variations from the participant's difference in background and to ensure theoretical saturation with the subsequent interviews. The fourth and fifth interviews were deducted from the general pattern formed in the first three interviews. A sixth interview was taken from a member of one association of physiotherapy, Tamilnadu who was ex-convenor for three years. It was taken after other members of the same organization refused to give information for the reason of fear. Since he is a member of this big private organization he was giving short answers and not cooperating in giving detailed answer for questions which demands the participant to speak more which made the researcher felt he may sometimes gave disinformation and was not taken in to consideration in data analysis.

The researcher initially contacted his friend for the participants with different background. After finding suitability of the participant from friend's information, the participants were initially contacted by friends through telephone to introduce the researcher. Then the researcher during the first conversation with the participants explains about himself, research topic, data collection method, data collection through phone, informed consent, anonymity, willingness to participate and when accepted to participate, they were asked to give an appointment during their free time and requested to create a interview friendly environment for him/her which means to be free from some phone calls & remaining in a place where they can feel free to speak by reserving a maximum of 75 minutes (Initially for first 3 interviews 60 minutes). The

researcher also made sure that the participants don't have any doubts. It is this way the researcher build trust with the participants.

Two male and three female participants were interviewed where the sixth neglected participant is a male. The information about their work sector, college where they graduated and their experiences were provided in appendix 2.

3.3.2 Data collection:

As mentioned in the research methodology, individual semi-structured in-depth interview was performed through computer assisted telephone for data collection. The interview guide was made with the help of the subject knowledge of public health. The interview guide along with interview questions was checked with supervisor and with peer who is a master student in public health to ensure all relevant aspects for the research question could be served. The interview guide was made in such a way that the questions were open ended encouraging the participants to speak more, gain rich & unanticipated information, with more relevant questions asked in the starting to make the participant feel the study is very reasonable and thereby willing to share their personal experiences. A participant appreciated in the beginning of interview saying 'that's a good question'. Also the questions were made such that a question will have only one focus and the sensitive questions were put in the end of the interview (41, 46, 47).

A pilot study was conducted with my physiotherapist friend living in Mumbai, India. It was conducted to know whether relevant information collected from the interview guide, whether the questions are understandable for the participant and what new questions can be needed for new information and the time it takes for the whole interview. The interview guide was modified after the pilot interview (41, 46, 47).

Skype interview was planned but all six interviews were conducted through telephone due to load shedding incidence in Tamilnadu in the recent months. Feasibility for skype interview and power availability was checked with selected participants and finally researcher conducted interview through telephone which is the only way left out. All participants had a mobile phone of their own and the researcher called them with help of computer assisted telephone (voip call).

Before starting the interview the researcher made sure with the participants about the interview friendly environment. Despite establishing a trust and cordial relation during the first telephonic contact with participant's, the interview always started with appreciation of participants' for accepting to give time and information, cultural informal talks, remembering

the research topic & the context and informed consent was also taken during briefing sessions. Then the researcher straight away asked the most important questions with the participant. The interview was taken in the native language Tamil and the researcher also encouraged the participants to use their own word. The questions were asked with open flexible mind; implying that they were asked in a way that is understandable for each participant and gave the researcher necessary & new information for the study (researcher as human instrument). New questions emerged with new information in the interview despite the interview guide directing the interview questions. Probes were used for details, elaboration and clarification. Probes also used to give the feeling that the researcher was listening carefully and curiously to the information. Probes were also used to show the ignorance of the researcher in the interviewing field encouraging for more information which was important for the reason that the participants were aware of the researchers' background. Frequently in the interview and at the end of the interview, the information was summarized by the interviewer and received remarks from the participant. Debriefing was done at the end of the interview where the participants were once again appreciated for their time, the wealth of the information given and they were asked to share their experience of the interview. They felt good & useful about the interview and no emotional disturbances encountered (41, 46, 47).

Four interviews were conducted on the weekends and two interviews on weekdays. All the interviews were taken on the participant's convenient time. Two interviews were for a period of 40 minutes where three other interviews were for a period of 70 to 85 minutes who spoke with lot of interest. The researcher was cautious of the signs of impatience, annoyance and boredom of the participants (41, 46, 47). Four interviews were taken at single session where one interview for the period of 85 minutes was taken at two sessions on the same day for the reason of participant convenience. The gap between 2 sessions was an hour and when started with the second session briefing of the first session was given to the participant. The researcher conducted the interview all alone by himself.

The interviews were recorded using digital mp3 recorder. Only one interview was taken at a day and there was sufficient time between interviews which allowed translating the interview notes in English and looking for the patterns grounded in the data. The sufficient time guided on what information needed to be collected from the next interview and who needed to be interviewed. At the end of three interviews a clear pattern was achieved to form a model and for the subsequent interviews the theoretical saturation was checked along with deduction (41). The data collected was discussed with peer who is a master student in public health for credibility.

Notes were taken on the emotions of participants which were noted only during the translation of the interviews as the interview being conducted through telephone and these were used in the analysis while coding (41).

3.3.3 Data analysis:

As mentioned in the data collection method, the interviews were transcribed in English after every interview to look for patterns, necessary information to construct a theoretical model and for saturation (41). Interview transcribed verbatim in English to facilitate discussion with supervisor and peer throughout the data analysis (peer debriefing) (41). The transcribed verbatim uploaded in microsoft word document. Then the interviews were coded openly (open coding) sentence by sentence which is done to break the data in to smaller units. In this step a low level of abstraction used to characterize the material which was close to the text. This was then followed by selective coding stage where important codes were selected according to the aim of the study by going through the material more focused. These selected codes were organized to construct subcategories by constant comparison of the codes. These subcategories then were grouped into categories and the categories were compared to find a core category. A little higher level of abstraction involved in each part of this step. This was then followed by theoretical coding step where axes between categories were looked for the formation of model. As mentioned earlier the whole process of data collection and the data analysis were discussed with supervisor and peer to ensure credibility in the model (how well the information is understood and reflecting the subjective reality of participants) developed by getting fruitful critics and comments (41).

Data → open code → selection of codes → subcategories → category → core category → formation of model

Figure 1. Data analysis steps in grounded theory

(41)

See appendix 3 for an example of how the analysis carried out from date to form codes, subcategories and Category.

Also analytical memos were written after each interview to get ideas for patterns in the data during & after transcription of the data which actually forms the first step in grounded theory analysis (41).

3.4 Trustworthiness:

Glaser and Strauss suggests four criteria for trustworthiness namely fitness, workability, relevance and modifiability by looking in to the nature of grounded theory which is more conceptual whereas the more descriptive content analysis qualitative study demands for credibility, transferability, dependability and confirmability (41).

The criteria of fitness explain the need for categories or model grounded in the data rather than the researcher's pre-assumed model that accommodates the data (41). The researcher worked on this criterion cautiously and showed the process of forming categories and model from the interview transcripts with quotations in the results section and appendix. The categories and model was finalized by having fruitful discussion and remarks with supervisor and peer.

The criteria of workability of theory explain the need for how good enough is the theory to explain what is going in the field or predict what will happen in the field (41). It was ensured by means of constant comparison of the data in addition to going through the data again and again. Also peer debriefing (expert & peer) for interview guide, data collection and data analysis ensured the ability of theory to explain the context. Member checks were done on telephone after transcription of data to ensure the data collected was similar to what participants said. Member checks for the model were sent through e-mail and replied by only one participant whom agreed the model very strong representation of current situation.

The criteria of modifiability explain that a theory is not constant. It is open to changes with changes in the world and was completely agreed by the researcher as mentioned in the theoretical framework (41).

The trustworthiness in grounded theory in general emphasize on providing a good chance for the reader to understand and follow the interpretations made. Truth is relative and the model is subjected to alternative and changing interpretations in grounded theory. Understanding the need, most of the data analysis is shown in the results (with interpretation of informant's information) and an example illustrated in appendix 3. Also as discussed in the social construction of reality under grounded theory, the theory is made by the researcher depending on whom he is and this means truth is relative. This states that theory which is formed in the research process is open to alternative and changing interpretations. The researcher in this study was well aware of this and tried to create a model which is close to the subjective reality of the participants. It is for this reason the researcher made constant comparison of the data, went

through the data many times, performed peer debriefing on the findings and member checks with participants (41).

3.5 Ethical considerations:

Kvale's ethical consideration for interviews which is accepted as the standard ethical considerations for qualitative methodology was addressed for the study. The informed consent was taken orally from all participants before beginning the interviews. The identity of the participants was only known by the researcher which was assured to the participants and the confidentiality of data which also was assured to the participants was maintained by the researcher (41).

4. Results:

The model best explains the physiotherapist perception of their profession in Tamilnadu. Two core categories; Demotivating rewards and worst career opportunities & knowledge deficit explained the professions current situation in Tamilnadu, India. The causes which have led to the two core categories were found to be unregulated educational institutions, low self- esteem of physiotherapist's, powerless physiotherapy professionals and low demand for physiotherapy services. The consequence of the core categories found to be the worsening physiotherapy profession explaining the current status of physiotherapy profession in Tamilnadu. The diagram below describes the model which is grounded in the data. The readers are encouraged to look in to the subcategories in the model before reading the results in detail under each category.

Unregulated educational Institutions

1. Profit concerned colleges
2. Fradulent private colleges
3. Frightening strategies
4. Standard not a concern
5. Mismatch production & job availability

Powerless physiotherapy professionals

1. Unfavorable tradition of consultation
2. Denied independency
3. Doctors envy and upperhand
4. Nil regulations for authority
5. Forced misconduct

Low self-esteem of physiotherapists

1. Worried about people perception
2. Unhappy to be known as physiotherapists
3. Much relied on modalities

Low demand of physiotherapy service

1. Poor understanding of PT role
2. Unaccepted nature of therapy
3. Poor awareness
4. Orthopedicians fear of losing patients
5. Rural absence of physiotherapists
6. Poor affordability

Figure 2. Physiotherapy profession in Tamilnadu, India

Core category

Knowledge deficit

1. Insufficient educational syllabuses
2. Poor acquired knowledge & low self-confidence
3. Unprioritized continuing education
4. Unskilled and immoral teachers
5. Lack of evidence based practice

Core category

Demotivating rewards and worst career opportunities

1. Poor salary & struggling life
2. Hard work and no fruits
3. Poor employment opportunities

Worsening profession

1. Fall in college admissions
2. High discontinuation of profession
3. Harmful and less effective services
4. Assymetry of information and immoral activities
5. Unhappy and frustrated professionals

4.1 Demotivating rewards and worst career opportunities:

The participants strongly felt that poor rewards and career opportunities along with knowledge deficit is the main issue for the current physiotherapy profession. The participants felt that they are in a profession in which the professionals are paid *poor salary* resulting in a *struggling life*, a profession which involves *hard work* for which there was *no fruits* and a profession where there were *poor employment opportunities*.

The participants were very much frustrated for the salary which was paid for the physiotherapy professionals. They considered it to be the lowest salary similar to the salary of helpers in hospitals. In addition they expressed inability to manage living expenses with that low salary in the current situation of high living expenses. They also expressed their sadness that they were not given any other benefits. According to them they were paid a salary of 67 to 78 USD which is far less than other small jobs in other comparable professions. They expressed that it forces them to work extra by making private home visits and without the extra work they cannot manage their living expenses. The four to six hours of extra work along with the usual eight hours of work in hospital or clinic made them feel struggle for their entire life just for a living. Unmarried physiotherapist's also showed their future concerns particularly for males who are the family's bread winner, in regard to this low salary. They also told that the low salary paid for them is caused by the increased availability of physiotherapists in Tamilnadu which make the employers dictate a low salary and physiotherapists demand for a decent salary is not listened to.

"In hospitals, clinics physiotherapists are paid only 78 USD these days. They also go for home visits. They cannot improve in their finance situation. More number of PT's and they are easily available. Instead PT's demanding a salary; hospitals decide salary for PT's. " (participant-2)

Informants also strongly expressed their experience of working hard; both while they were studying in college and while they are working, but the scope for finding a job with good rewards in the job is nowhere near to their hard work. They compared their education with other programs and salary with engineers who were the highly paid professionals these days. They also explained the difficulties of passing break semesters during their education. Break semester means a semester examination where students should pass all the subjects and in case a student fails in one subject he/she can do the re-exam only after six months. Also only when they pass the exam they were allowed to study the next semester which means some students who were

not good at studies must study the four and half years programme and then have some additional years. There were some students took 10 years to complete the programme. The participants views that students who have graduated from such a difficult programme had high hope of finding a job where else they found no scope for their profession.

They brought up the issue of physical and mental stress involved in their job and the fruits (rewards) they get for their work was unjustified. They felt that they had received appreciation from their employers but they had encountered monetary loss which a participant has described as rewards given only at mouth. They also expressed that employers has this strategy of appreciation to motivate and retain their employees by giving best employee awards in a clinic & fitness center. They felt that they were paid very badly for their efforts which were like unwritten rule. They felt that their work load was high in a hospital where there were few therapists taking care of many patients and also got responsibilities to cure and satisfy patients but the monetary rewards were poor.

"Rewards are given only at mouth level. The employers knew that our profession involves a lot of physical stress, they are happy with patient satisfaction also but they don't give salary hike. If you look for other benefits, PT'S in a hospital and clinic can get treated by their colleague PT'S for their problems and they can use the fitness instruments for their own fitness. These are the other benefits we get other than salary." (Participant-5)

The informants expressed their despair over poor availability of physiotherapy vacancies both in public and private sector in Tamilnadu. The informants were unhappy for the government jobs which are not announced for a long time and the time varies between participants. They mentioned that even a graduate with gold medal has no idea to where and how to get a job and to opt for a suitable career. When it comes to job, neither the good college where one graduates nor the good grades one has, got no preferences. Wherever they go at least one physiotherapist occupying the job who will be considered enough for the organization and even when there was a need for physiotherapist's in public and private sector, many were not filled. This forces most of the new graduates depend only on private home visits and struggle to find even a low salaried job in Tamilnadu. They also didn't had the luxury to open a clinic of their own in cities which were expensive and the possibility to run a clinic in rural areas was very poor considering the poor awareness and unwillingness of the rural people to afford for physiotherapy.

"When it comes to job I don't know what to do. Even a gold medal student doesn't know where to find a job, don't know what scope it has. We don't have government job.

We don't know that scope is a big question mark. Despite whatever good college one graduate from or whatever good marks one scored the scope is lacking." (Participant-3)

They also talked about the increased unemployment that was seen in this profession. They feel it is due to mismatched production of graduates and the job availability in Tamilnadu. It is because of these poor employment opportunities they told that they had limited work scope or else they made agreement with doctors which seems to be abusive.

"The employment opportunity for a PT is very less. This is because many physiotherapists' comes out from college with only less job openings. Though hospitals are many they don't give importance to physiotherapists. There is a high competition here for getting job and getting patients for clinic." (Participant-4)

4.2 Knowledge deficit:

The other core category which was identified to be the factor responsible for the current situation of the profession was knowledge deficit commonly seen among the physiotherapy professionals.

A participant has strongly expressed the feeling of having an *insufficient syllabus* in the education of the physiotherapy programme in Tamilnadu. She felt that the universities have to improve the syllabuses that create physiotherapists who can be more independent and confident while practicing the profession. She also felt that the syllabus was superficial in private universities than in the government university. She was herself a graduate of deemed university.

"Generally in TN, the education we get here is not sufficient at all. They need to add more syllabus, teach more practically and only then we PT's can feel confident of practicing independently and own a private clinic also. They (universities) need a lot of improvement in regard to syllabuses." (Participant-3)

The participant's intensely exposed the poor knowledge that they received from their educational institutions and this made them feel less confident whether they can treat their patients independently. They felt that they were scared to practice and they doubted their knowledge. They were not confident of either their diagnostic abilities or their ability to satisfy their patients. They started to realize this when the time comes for them to work and when they attended interviews for a job.

"After I passed out, I was feared how I will satisfy a patient with my skills when I open an own clinic. I also feared how can I diagnose properly, because my teachers not able to give me good knowledge to me. I was not given a proper knowledge by any teachers, so that am scared." (Participant-1)

The informants felt the situation of knowledge deficit prevails for the reason that there were *unskilled and immoral teachers* that existed in educational institutions. They explained that the teachers who were responsible to transfer the skill and knowledge were not sufficiently skilled and were fresh graduates. They said that this is a kind of tradition in colleges that every time their senior batch students will be the teacher and once they graduated they were teachers for their junior's batch students.

"In addition to this basic level knowledge in our universities, those who have graduated freshly from our university are the ones who teach us. So we cannot get sufficient knowledge. There is a tradition where the senior PT's teach their juniors of their university and when the juniors graduated, they become teachers of their university and teach their juniors." (Participant-3)

They also pointed out that these unskilled teachers were the one who limit the physiotherapist's role implying that it was caused by their incompetence. They experienced that these unskilled teachers teach less by saying that was sufficient for being a therapist and were much focused in to the exam preparations alone for the students. It was because of those teachers teaching them only to pass and the questions were repeated, students prepare only to pass and aim nothing bigger.

"The lecturers usually limit teaching by saying students, it is enough for them. When it comes to practicals, they don't teach well which technique is appropriate for what type of medical conditions."(Participant-5)

It was said in a manner of gratitude to teachers by an informant who told that she was happy with her teachers because they help them to prepare in a way that they can pass the exam. This gives the interpretation that the teachers just wanted their students pass in the exam which has got no motivation for their students to become a perfect physiotherapist's. These unskilled and immoral teachers were the one who have led to the knowledge deficit in physiotherapy profession.

"Teachers are good because they teach us how to prepare for exam; they help us to read the important question, how much portion we have to read and all. Mainly their concentration is how to make the students pass because we need to get 50% for pass. They will teach how to prepare for exam and how to present the answers in exam papers." (Participant-4)

An informant had also pointed out that the teacher's envy was the reason for not giving adequate knowledge. She mentioned that the head of department was a doctor who has completed rehabilitation medicine and he was not willing to provide good education to physiotherapy students, despite the awareness of how much skills needed to transfer. The informant found that the reason was the envy of the doctor towards the growth of physiotherapy profession.

"My' Head of Department' (HOD)who have done rehab medicine was well aware of what more we need to learn, doesn't want to bring changes because he don't want PTP to grow good. So he didn't give importance for clinical exposure or during rounds in a hospital. They never give patient voluntarily to us to do an assessment and plan for treatment." (Participant-3)

The informants felt that their education was stopped after their education from college and no continuing education been offered from their workplace or health care organizations. They felt it was the case throughout the whole Tamilnadu where the employers in private health care sectors were not prioritizing to improve the skills of physiotherapists for the reason that their improved skills had no profits for their institution. They also felt that the employers felt alright with the skills and nothing more to be improved for the physiotherapist to improve the quality for the patient as it was a business for employers and not a service to patients.

"Once we are graduated, learning is stopped for us. What we learned in our school is what we practice here, that too from doctors or hospital side there is no motivation or encouragement to send us for learning or provide such opportunity to us. This is because they feel that we seem to be enough to deliver the service for their clients. Only they don't have any profit associated with it. It is business here everywhere." (Participant-3)

An informant has felt very strongly that lack of evidence based practice in physiotherapy as the dominant factor of poor performance of physiotherapist's in Tamilnadu. Informants blamed most of the physiotherapists for the increased use of electrotherapy over the years which in fact

have some bad consequences rather than curing the problem and paid no attention to practice which was evidence based.

4.3 Causes that lead to demotivating rewards and worst career opportunities & knowledge deficit:

Four main categories were found to be the cause for the phenomenon's demotivating rewards and worst career opportunities & knowledge deficit. They were unregulated educational institutions, low demand of physical therapy service, low self-esteem of physiotherapist's and powerless physiotherapy professionals.

4.3.1 Unregulated educational institutions

It was evident from the informants that most of the educational institutions in Tamilnadu were private and only 2 were government institutions. These private institutions were *profit concerned* and were not worried about the quality of the education. They recruited unskilled and fresh graduates as teachers for a low salary without worries about the quality of transfer of knowledge to the future therapists as long as they make a profit out of it. An informant has pointed that it was the unskilled teachers who had accepted job for such a low salary in colleges. They mostly recruit fresh graduates who graduated in their institution for the purpose that they can covet admission of high school graduates to join their college. By advertising that possibility, once they finish the programme they will be considered highly to be recruited as teacher in the same institution. It was the quantity of students that was their concern and not the quality of education as education was considered commercial or business for these owners of educational institutions.

"The college administration want to fill students for their college, they are money minded for whom students knowledge or future is not a concern. They recruit fresh graduates as teachers for a low salary. Only quantity of students matters for them and not the quality of education."(Participant-1)

It was strongly mentioned by an informant that the private educational institutions do *fraud activities* so that in one or other way they ensure good admission of students and at the same time safe running of the institutions. When they found some of their graduates finding job in a foreign country, they claim shamelessly it was because of educational standard in their institutions and use this as a strategy for admission of students whereas the graduate had found a job abroad has found it with his/her own capabilities. The colleges also claim a good scope for

physiotherapists within Tamilnadu to get admissions which was not the case, but still go to high school to canvass students for joining their college. Above all, these colleges don't have sufficient number of teachers as per the government regulations, but still has managed to show enough teachers on the day of governmental inspection and it was for the same reason they recruit physiotherapists only for that day and even they show their own students who look little old for his/ her age as the teachers of their institution.

"Private colleges don't have enough staffs. These colleges will show more staffs (teachers) only during a government inspection by paying few PT's for that day alone and even sometimes they use their own students who look older as staffs during inspection. They actually don't have enough teachers." (Participant-1)

The private educational institutions threatened their students who struggle for the poor educational standard in their institutions. They used threatening as a strategy against those struggling students to control them. They do it through their loyal teachers who threaten students for failing them in examinations. They also failed them in the break semesters which mean it would be a loss of 6 months for the student. It was because of this threat; students don't come forward to struggle for good education rather they concentrate on passing the programme and prefer to get out of the college as soon as possible.

"Students cannot oppose the administration, they control us through our teachers who threaten us by saying that they will fail us in practical examination and push us back in break semesters. Students think about their future life, they want to complete the programme and leave the college as soon as possible. No students ready to oppose the admin and spoil their life. They want to leave the college by passing exams. No one came forward on this issue." (Participant - 1)

It was also clear in the data that some of the parents and students are concerned about getting a graduation certificate from the institutions and they are not worried about the standard of education. Their intention was to go abroad for which they need a certificate and not to struggle against the standard of their education. Those students improve their skill of their own with the guidance from their seniors who works in a foreign country.

"Parents wish their children to go abroad for a job after completion and have no concern about the standard of education given in the institutions. Presently, students improve their skills of their own for a job abroad by getting suggestions from their seniors

working abroad. They want to get a certificate for their graduation after which they qualify themselves for a job abroad. They don't mind about the standard of education." (Participant-2)

Tamilnadu has excessive educational institutions which according to an informant are more than 50 and each recruited a minimum of 50 students in the past. The informants felt this many institutions were unnecessary considering the poor employment opportunity to provide job for all the graduates. They claim that there was a mismatched production of physiotherapists and number of employment opportunities existed in Tamilnadu and it was this reason which caused too much unemployment for physiotherapists in Tamilnadu.

"The number of institution presently is more and number of PT's without job is also more. So, government has to reduce the number of colleges. Only selected member should study and they get job after the completion if there are not many jobs. Presently many study and they are jobless. So there is no need of this number of institutions". (Participant-3)

4.3.2 Powerless physiotherapy professionals:

The physiotherapist has an *unfavorable tradition of consultation* in Tamilnadu. Whenever a patient had a problem they see a doctor who directs them to physiotherapists and it seems that traditional belief on the doctors and the existing consulting system made people to prioritize to see a doctor rather a physiotherapist. This second consultation was considered very unfavorable for their profession's independency and the informants has strongly opposed against this and they wish the patients comes to them directly so that they don't have to depend on doctors.

"If a patient comes to our clinic, they don't come by having faith on us. For example if we own a clinic, patients don't come simply by having faith on PT, they come from an ortho or neuro doctor. So, we need to be dependent up on the Orthopedician or neurologist. In a hospital it is worst. Patients go directly to doctors." (Participant-1)

It was not only the tradition of referrals from the doctors that has lead to the dependency to doctors. It was also the *denial of authority* by the doctors for physiotherapists. The doctors were the one who asses the patient and prescribe physiotherapists despite limited knowledge in physiotherapy and what works well for the patient. Thus physiotherapist's freedom to assess the patient, plan and provide the relevant therapy on which they were trained in their education was denied and also pushed to work as attenders doing what they were told to do.

"Patients go directly to doctors. Doctors decide about PT treatment, what exercise or modality to give and how many sessions to be given. What we PT's do is work as an attender. We do what they say. This is common in all hospitals."(Participant-1)

The doctor's behavior of denying the independency was found to be the *envy* they possess against the growth of physiotherapy profession. The informants pointed out that it was because when the physiotherapy profession grows, it would seriously affect the income and respect that doctor's gaining now, particularly for orthopedicians. It was mentioned that the treatment would be highly incomplete without physiotherapy and the orthopedicians knew it very well. But they don't want physiotherapist grew like them and for this they dominate therapists in order to make physiotherapist depend to them. They also dominate by demotivating & disrespecting therapists working under them, resist the recruitment of therapists in hospital, disregarding the role of therapists to patients, make rules that limit the role of therapist towards service which was how they under utilize the physiotherapy service. They also struggle against the right for therapist to use doctor prefix while other quakes using the prefix was not of their concern. The orthopedicians consider therapist as their first enemy and competitor and they suppress them according to the reality perceived by them.

"Most of the doctors demotivate us and they don't want us to be outspoken, they don't utilize us sufficiently. They are worried and feared that we PT's will come equal to doctors; will earn more respect from patient. So doctors dominate physiotherapists. They don't give enough freedom. They also restrict our role, they determine where and how our role should be shaped in the meeting with the patient." (Participant-3)

One participant in addition told that doctor's envy is the reason for neglect of continuing education by the health care organization.

"With what I have known almost all the hospitals don't provide continuing education. Because, administrators feel our skill is enough for their hospital. They don't think an improved therapy is a necessary treatment for their patients, but it is also the doctors in hospitals who don't want us to grow by influencing the administration and mostly it is the doctor who is the director or administrator." (Participant-1)

There were no governmental regulations that guide physiotherapists, doctors and people on the independency of therapists. This led to the conflict of views that the therapists claiming they can assess and treat patients independently in accordance with the guidance of the private

organization named 'Indian Association of Physiotherapy' (IAP) whereas the doctors claiming that patients should be referred through them and therapist could not practice independently.

"Medical doctors say that physiotherapists are not doctors. Medically qualified doctors should refer them. But IAP says we can treat patients independently. Government don't have regulations on the independency of PT. "(Participant-2)

The physiotherapist's were also forced to induce the demand or to follow the induced demand by doctors for the reason of making money for the hospitals. The therapist has to obey the doctor's and the hospital management's in order to secure their own job in the hospitals despite they don't had incentives for doing that. The doctors induce demand by increasing the follow-up sessions and use of irrelevant modalities in order to make more money.

"Though we may feel we can treat people within few days than prescribed by doctors, we give therapy in such a way we manage the prescribed days because we are asked to do this. We don't have any freedom. We are in a situation that we follow the orders" (Participant-3)

4.3.3 Low demand for PTS:

The demand for physiotherapy service was very low in Tamilnadu. One reasons for the low demand for PTS being the *poor understanding of the physiotherapy role* for patient among doctors more especially among the orthopedicians and the Bachelor of Medicine and Bachelor of Surgery (MBBS) doctors. It was claimed that orthopedicians has an illusionary view of physiotherapy that the role of therapy was less for patients which was under estimation of physiotherapy. The MBBS doctor's don't have any knowledge about physiotherapy and which medical problems that should be referred to physiotherapist's. It was pointed out that the misleading education gave them such poor understanding of physiotherapy role. Also an informant expressed the sad understanding that health minister himself was an orthopedician and he considered physiotherapy as non-essential service and there was no involvement to provide job opportunities to physiotherapists even in government hospitals.

"When it comes to MBBS students, they knew the importance of PT for many conditions only when they see their referred patient getting good recovery. Otherwise, they think our role is little because they learn little during their education about PT. They should be taught clearly when there is a role for PTS and referred to a therapist." (Participant-5)

The nature of therapy was unaccepted by village people and illiterate people. It was told by an informant that the village people has the habit of using drugs to relieve their problems and therapy was something new for them. Especially therapy demanding them for many follow-up sessions which means they have to spend more money and time. But since the villagers expect magic like when they use drugs the pain relieved, they want the therapy in the same way and when it was demanding time and money; they were unwilling to take therapy. Instead they prefer to go to traditional oil massager where they pay only once and very less to get some relief which was traditional belief for them. It was also explored that it was for this reason they were not satisfied with it compared to the city and literate people who accept the nature of therapy.

"In villages, they welcome PT services but they are not willing to pay. They expect the pain to be relieved on single day. But when we ask the session to be continued, they are hesitant to come for follow-up for the reason of not willing to pay." (Participant-2)

According to the informant there was also *poor awareness* of physiotherapy service among the people in Tamilnadu and the percentage of lack of awareness differed between participants from 50% to 90%. The lack of awareness was higher in village areas and among illiterates than in the urban areas and among literate people. The physiotherapist felt a definite need for bringing awareness of physiotherapy service in Tamilnadu.

"These days' 50% people are aware of their need for PTS. But the rest don't know. They have not utilized our service. They don't know that they have to approach us. There is a very high need for PTS. But there is no proper way established to improve demand from patient side." (Participant-3)

The growth of physiotherapy profession and gaining importance among the patients was found to be the reason for the orthopedicians fear of losing their patients and it was because of this, orthopedicians doesn't refer the patients to physiotherapists.

"On the other hand, those orthopedicians who know our service benefits doesn't want to utilize us for the reason they are scared whether PT's will grow more than doctors in their specialization. They also worry if physiotherapy role is increasing, orthopedicians role would be decreasing for patient." (Participant-3)

The physiotherapists were found to be absent in the rural areas and this was found to one reason for poor awareness of physiotherapy service in the rural areas. The informants claimed that mere presence of physiotherapists would give awareness of the service. They also want

physiotherapists to get positions in the primary health centers and provide benefits for rural people where there is a huge need for physiotherapy service.

"When compared to cities, rural areas having more elderly population where the need is high and who lack even receiving basic medical service there. The demand from people in rural areas is very less which is because no PT'S work in rural areas to create awareness." (Participant-3)

It was also the inability to afford therapy by poor people that was found to be the reason for low demand for the physiotherapy service. People with low socio-economic status live with pain and deformity rather than they spend money for therapy because of their poor affordability.

"Those who are rich, only feel they need PTS. Those who are poor think it is necessary to tolerate in their life and they never go for pain management to a PT. If you see the poor people with pain and deformity, they don't care to go for PT." (Participant-5)

4.3.4 Low self-esteem of PT's:

The physiotherapists were worried about the way people perceive them rather than being happy to deliver quality service. They were worried that people consider them as massagers, attenders and think physiotherapy service as grandmother treatment.

"In village, people think PT'S are the people who give massage to hand and leg or the one who applies machine on body and PTS is a grandma treatment. Our technique is different. We are not welcomed well. (Grandma treatment means in olden days, people believe on a healer who is very much blessed one who cures you by touching you and relieving spasm with oil massage.) But we have studied a lot and our technique is scientific." (Participant-5)

The physiotherapists wanted them to be known as doctors rather than as physiotherapists. They were unhappy and unsatisfied for being unable to use the doctor prefix and people not calling them doctor. Physiotherapists compare their educational duration with duration of dentistry and demand for using the prefix doctor like the dentist use the prefix doctor. It was for the reason to be called as doctors, physiotherapists also use drugs.

"One more thing is during college education, they were told to use doctor prefix, but when they came out they are not allowed to put prefix in hospitals neither patient call them doctors also. They are worried that they also study for 4 years like Bachelor in Dental Science (BDS) and they have 6 months internship but still not recognized as doctors." (Participant-5)

The physiotherapists relied very much on the modalities for their therapy which was abandoned in some countries and hasn't worked on the self-improvement to make the therapy effective by learning more manual therapies. Physiotherapists wish the electro therapeutic modalities with software programs installed for the medical conditions to do wonder for the patient than they do apply their therapeutic skills for the patients. It was remembered by an informant that this simple way of using only modalities made the organization managers think of carrying out therapy with the help of attenders.

"Physiotherapy profession in TN is ok but not completely good. For that we PT's should qualify us. PT's presently mostly depends upon modalities for their therapy, they don't use manipulation and other new manual techniques. Only few use new techniques. To me, this is a huge drawback" (Participant-2)

4.4 Consequence of knowledge deficit & demotivating rewards and worst career opportunities:

The core categories demotivating rewards and worst career opportunities along with knowledge deficit was found to be the main factors that were leading to the **worsening physiotherapy profession** in Tamilnadu.

It was evident from the data that the poor job opportunities and salary were the one that determined the fall in number of students studying physiotherapy programme in Tamilnadu. This has lead to a situation where some educational institutions stopped running physiotherapy department and some other institutions are running with low admission. The informants felt that the students who opt for physiotherapy programme have opted with ignorance and not because of any interest to this programme. This dramatic *fall in admission* which seems to be a threat for the profession also seems to be a breather for physiotherapist who felt that the jobless therapists will have less struggle and happy for the reason that this will stop producing future jobless physiotherapist's.

"As the students have no jobs placements and they see a struggle for a job after completion, the admission for PT programme reduced heavily in all institutions. So they start to give importance to other programmes they run for which there is good scope" (Participant-2)

The poor rewards and the hopeless career in physiotherapy field has led many to discontinue working in this profession and opted to work for companies with software related jobs like medical coding, medical transcription or in the call center profession where they were preferred

for their educational background and English speaking abilities. They opt for those professions merely for the good salary that they provide in those sectors. They don't opt for that profession immediately after their graduation but they opt either after struggling to find a job or else when they don't find any improvements for themselves in that career.

"As I told you before, only 10 friends are continuing now in PT profession and the rest 50 friends of my batch are now working in medical coding. They give a good salary for us at least. So the PT's prefer to go to medical coding leaving PTP. Now you can see more than half PT's prefer working in some other profession and only a few work in small PT clinics, hospitals etc.." (Partcipant-3)

The knowledge deficit among physiotherapist's proved to be *harmful and less effective* for the patients. It was because they were less skilled they gave inappropriate therapy which has produced bad results for the patient rather than improving their health. In many cases the therapy brought fewer improvements because of the poor skill of the therapists. It was also explored that this brought lack of trust on physical therapists among users. They also claimed the increased use of electrotherapy modalities and their poor knowledge in the manual skills was something that cause less improvements and more harm to the patients.

"Because PT's are less skilled, they cannot show many improvements for patients. They don't give relevant therapy. Many don't have a good skill to diagnose and don't give appropriate therapy" (Participant-1)

The physiotherapists were also involved in *immoral activities* which were influenced by the *asymmetry of information* existed between the patient and therapist. Taking advantage of the ignorance of the patients, therapist who was the supplier, induced demand for making money. This happened only in the privately owned clinic both by the employees & employers and in the private home visits. They induced the demand in many number of ways such as using electrotherapy modalities irrelevantly, stretching therapy by delaying prognosis initially with irrelevant modality and changing later with a relevant one, delaying to teach exercise and producing unnecessary follow-up. They also refer patients to orthopedic surgeons unnecessarily who comes to them for therapy which was also supplier induced demand for the fact that despite the problem been treated with therapy alone, the therapist refer to surgeon merely for getting money from surgeon for the referral as per agreed between the two. Physiotherapist's assess the patient's socio-economic status just by looking to the ornaments they wore & inquiring about their occupation and induce demand accordingly. It was also evident that physiotherapist cure

the patients problem and don't rehabilitate them which means the patient has high chances of getting the problem again. This gave them opportunity to treat the same patient again and make money.

"There are therapists who stretch therapy for making money. In situations, where only 4 days is sufficient to treat, they initially give one modality through which they give some relief to make patient continue with slow prognosis, followed by keep changing modalities or adding modalities to relieve pain slowly. Only after many days they start teaching exercise. They do it cleverly to have many follow-ups and make money. We are making money out of their ignorance." (Participant-3)

The physiotherapist's immoral behavior of inducing demand was seen to be the result of their poor salary and income opportunities. It was also because they need to give a share to the doctors for referring patients to the clinic and to cope with living expenses for survival. These immoral activities would be vanished with decent salary and independency in getting patients.

"As our survival chances in regard to money are difficult, we then increase the demand by stretching the sessions for compensation which depends upon the financial weight of the patient. There is 50-50 share between doctors and PT'S which also force PT'S for inducing increased demand from our side. (Participant-4)

"In private, when physiotherapists are paid proper income and don't have to pay any for doctors for their reference, it can automatically avoid the supplier induced demand." (Participant-4)

Because of their poor opportunity to improve financially, the physiotherapists also used medicines to run their privately owned clinic successfully. They used medicines also for the purpose that they wanted to be perceived as doctors and to bring faith for patients who have faith on medicines. But physiotherapists were neither given the rights to prescribe drugs nor do they have the knowledge to prescribe the medicines.

"Though therapist knows they are not authorized to prescribe medicines, in order to run a privately owned clinic successfully they prescribe medications." (Participant-2)

The physiotherapist were unhappy and frustrated for several reasons such as no good jobs and career opportunities for them in Tamilnadu, worst salary with which they struggle throughout their life, unacceptable poor standard of education and poor skills among physiotherapists

bringing bad image for their profession, dependency to doctors for their survival and government's poor involvement to improve their profession.

"There were no jobs posted in hospitals. Government doesn't give more importance. They speak a lot but do nothing for us. (Frustration) When there was a vacancy, they didn't take initiative to fill those. (Unhappy)" (Participant-2)

5. Discussion:

5.1 Reflections on theoretical framework:

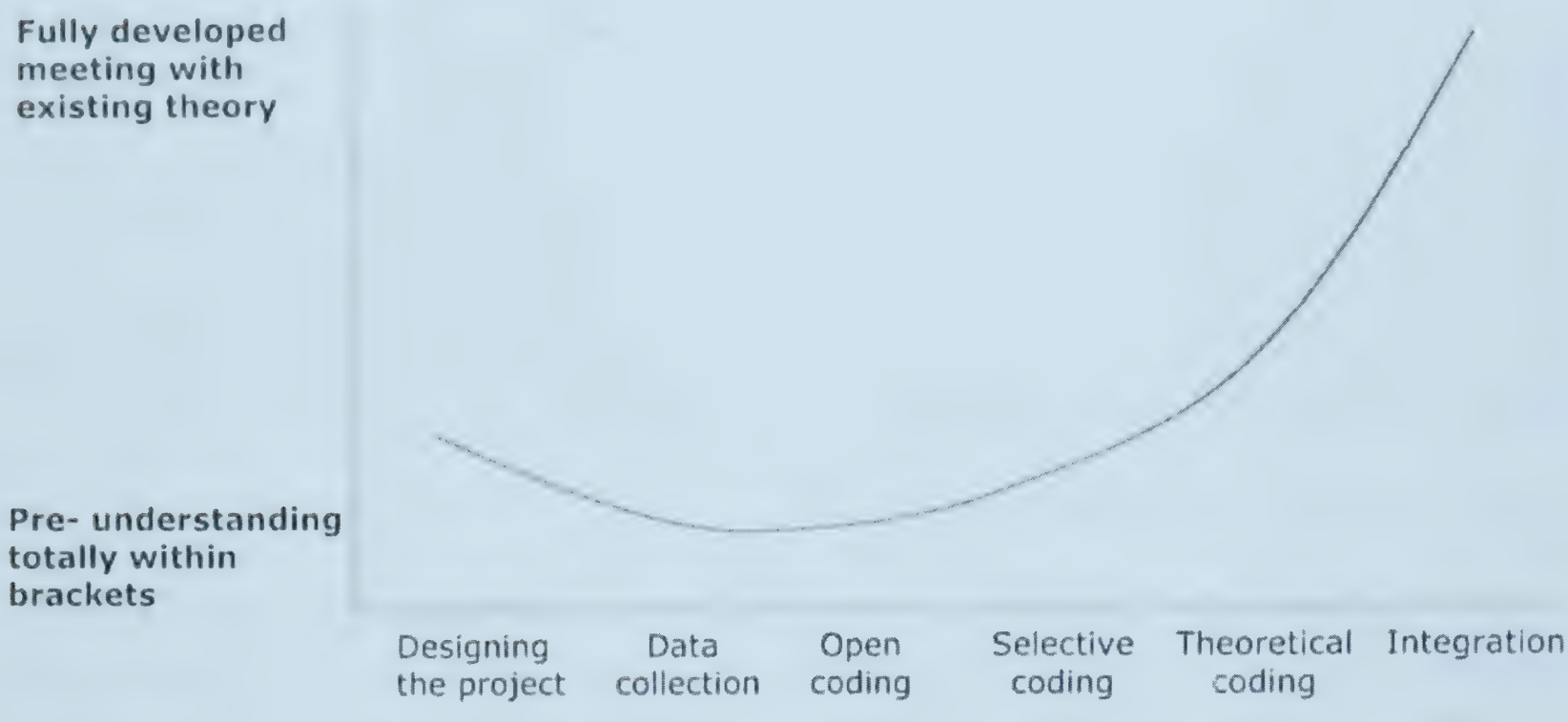
The symbolic interactionism in which the grounded theory is rooted was found to be useful in constructing the interview guide by looking whom the physiotherapist professionals interact in their day to day life to come up with their own understanding of field. Open semi-structured questions were thus formed in line with the interview guide. As the study was to explore the perceptions of the physiotherapists about their profession the theory of symbolic interactionism was found to be the most suitable for the study by exploring the experiences of informants. Also the grounded theory principles of generating theory was useful right from the data collection and it was very useful to construct a meaningful theory that is grounded in the reality through the steps of coding, selective coding and theoretical coding (41).

5.2 Reflections on methodology:

In-depth interviews were found to be suitable for the data collection method to explore the experiences of the informants in very detail (41). It was found to be very feasible for the researcher to conduct the interview through telephone. This way of conducting interviews through telephone had advantage of very low cost for the entire study by conducting interview from a foreign country and an easy access to geographically dispersed informants in Tamilnadu. The telephone also made it easy to speak about the sensitive issues. But there were some disadvantages with telephone interview as well. The researcher was unable to create trust with sixth interviewer (while rapport and trust created with other informants by previous contact and brief explanation of the study before interview), unable to use visual cues during interview, loss of non-verbal data (as auditory cues only were used for the data analysis) during interview and loss of in-depth responses with difficulty to probe (48). The researcher was well aware of the data being lost while translating the information and it is for this reason the researcher who is familiar with both Tamil and English language tried to minimize data loss with careful translation.

The pre-understanding of the physiotherapy profession was useful in the research, however, it was used carefully from the data collection stage to data analysis stage in order to get more of new information and in addition, also develop a theory that was grounded in the data (41). Honestly many new information and concepts was found during data collection and analysis. Some of those were poor job opportunities overall and in rural areas, fall in admissions in

physiotherapy college, salary not meeting survival, doctors poor understanding of physiotherapy role, knowledge limiting teachers, envy & conflicts between doctors and physiotherapists, many ways of supplied induced demand and physiotherapists poor self improvement. The use of pre-understanding was guided by the following diagram.



Source: Dahlgren L, Emmelin M, Winkvist A. Qualitative Methodology for International Public Health. 2nd edition. Umea International School of Public Health: Umea University; 2007 (41)

Figure3. Dynamic between open minded interpretation and the use of pre-understanding during the research process (41).

Apart from the limitations with collecting data through telephone, there are few other limitations. It would be better if a comprehensive model about physiotherapy profession was formed by collecting information from government authorities, doctors and patients. It was not feasible with time to finish a master thesis. The sixth interview which was planned with the present convener of big physiotherapy organization might have contributed some information for the study that refused to participate in this study. The geographical representation of the informants was limited to the north, central and upper most region of south and didn't include the southernmost region of Tamilnadu due to time constraint.

5.3 Detailed explanation for excluding sixth interview for data analysis:

After five interviews, the researcher decided to get information from a last participant to ensure the theoretical saturation and to see the variation in information. An important member of an association of physiotherapy was selected from the association's website. The participant who initially excited and willing to participate, gave some information in the first contact, later, on the day of interview asked researcher to take interview from other person of the association who is in the advisory committee and also was ex-convenor. This new participant initially excited like the old one and was explaining his experience in giving interviews to the television channel accepted to participate. On the interview day, this person in advisory committee hasn't received the call for a long time and later asked me to refer back to the important member for interview. The important member told that advisor & ex-convenor was afraid to give interview but he can give interview. Again on the day of interview, the important member also got afraid (probably influenced by the other guy) and asked me to give my Swedish phone number. He then called later on that day to the Swedish phone number and accepted to give interview next day. As usual he hasn't given the interview and referred another ex-convenor who actually gave interview that evening. It was clearly seen the informants from this association were feared to give interview and the information collected was less as the participant gave one sentence answer for open questions and also gave diplomatic answers with an attitude that the interview could have potential harm for him. It was for this reason the information is not taken in to consideration for data analysis.

5.4 Analytical consideration:

A grounded theory was used instead of the content analysis as the researcher was interested to explore and explain the perceptions of the physiotherapists with a theory that is developed with higher level of understanding grounded in the data (41). An qualitative content analysis is used when the aim of the study is to give concrete description of the phenomenon by summarizing the understandings of the findings from the data with the help of coding and illustrating the summaries with the data close to informants words . In addition, content analysis is also used to quantify a phenomenon to test the hypothesis which was not the aim of this study (49). The grounded theory's organized step of analyzing data was found to be very useful in finding the concepts and creating a model from the data. Many concepts were evolved during the data analysis followed by the general pattern found during the data collection.

5.5 Key results of study:

Writing the results is a tricky issue in grounded theory as it is all about conceptualization but one also have to illustrate the findings are grounded in the theory. The researcher here tries to give the reader a chance to understand the theory grounded in the data but also justifies the standard of giving priority to conceptualization in the theory generating study (41).

The model created from the subjective reality of informant's (physiotherapists) about the physiotherapy profession in Tamilnadu shows two core categories: Demotivating rewards and worst career opportunities & knowledge deficit among physiotherapists in Tamilnadu which was due to reasons like unregulated educational institutions, low demand for physiotherapy service, low self-esteem of physiotherapist and powerless physiotherapy professionals finally have led to the current situation of worsening physiotherapy profession in Tamilnadu, India.

5.6 Implications of the study:

The findings from this study clearly indicate the need for protecting the physiotherapy profession from death and improving it to the standards set by WCPT in order to ensure the physiotherapy service provided to all the people of Tamilnadu.

Based on the findings and suggestion from the informants it is very clear that the profession needs a council to regulate and promote professional development. The council needed to be established at both central and state governmental level which is lacking now and there is a demand for inter-governmental action. The council could act as a representative for the profession to explain the need for provision of physiotherapy service and professional development to the government of India and Tamilnadu. The council when formed has the ability to regulate the educational institutions by monitoring the teachers availability, teachers qualification, institutions infrastructure, standard of education provided in institutions, improving syllabus of universities at regular intervals, good workforce planning, providing research opportunities in institutions and promoting evidence based practice in the profession. The council can define physiotherapy profession as an independent profession and make eligible the physiotherapist as first consultants as was the case in developed nations after making necessary research on the skills gained through the educational system. The definition can determine the scope of profession and ensure smooth collaboration with other health care professionals to work in the team under the roof of health system in Tamilnadu, India to deliver quality service to the people. The council can improve the awareness of physiotherapy both in urban and rural areas and make the service available to people by bringing necessary regulations

of recruiting physiotherapist in health systems at all level (primary, secondary and tertiary) both in public and private sector which can also improve the scope of the profession. Regulations needed to be brought on the pay scale for physiotherapists particularly in the private sector and the rewards made sure with their responsibilities, hard work and education. Professional ethics should be forced through the council to regulate immoral activities of physiotherapist. This research serves as the starting point to understand the current situation of the profession and many quantitative, qualitative and health economic researches needs to be conducted to support the need of physiotherapy service provision for the people of Tamilnadu and to improve the profession to high standards set by WCPT which in fact ensures quality service to the people.

6. Conclusion:

The physiotherapy profession in Tamilnadu is perceived to be worsening currently due to the high discontinuation of physiotherapists in the profession, unwillingness among high school graduates to opt for physiotherapy and immoral practice by physiotherapist. The reason behind the worsening profession was found to be two important phenomenon's which are the demotivating rewards and worst career opportunities for physiotherapist in Tamilnadu & knowledge deficit among the physiotherapist. The factors which led to this two phenomenon are found to be unregulated educational institutions, low self-esteem of physiotherapist, less demand for physiotherapy service and powerless physiotherapy professionals.

The findings of the study clearly imply the need for forming physiotherapy council both at central level and Tamilnadu state government level. It is through the council with inter-governmental collaboration the need for physiotherapy service can be explained with which awareness of service can be improved. In addition, regulations on professional ethics, salary, employment, workforce planning, educational institutions, authority, research & evidence based practice and continuing professional development can be obtained through the same.

With the growing scope of physiotherapy profession throughout developed nations and the enormous benefits it provides from promotion, prevention, curative and rehabilitation services, the people of Tamilnadu should be provided physiotherapy service for improved health outcomes by the government of Tamilnadu and India through improving the profession's standard from the present worsening state.

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APPENDIX 1: **Interview guide:**

Professional skills gained through education

Educational institutions offering physiotherapy programme

Continuing education

ilnadu and Indian government lvement for professional elopment

Competition in the profession

Physiotherapy profession in Tamilnadu

Immoral activities by professionals

Scope of the profession

Professional authority

Rewards for the professionals

Physician and specialized doctor reception to physiotherapy

Physiotherapy service reception among people

Interview questions:

- How do you feel as a physiotherapist in Tamilnadu?
- How is physiotherapy profession in Tamillnadu?
- What do you think about skills received by physiotherapy students from institutions within Tamilnadu?
- What do you feel about the existing number of physiotherapy institutions within Tamilnadu?
- Could you please tell me about the competition in physiotherapy field?
- How are physiotherapist rewarded in their working place?
- Is there any continuing educational training offered in your work place? If yes, could you please describe about it? If no, what do you think the reasons could be for not offering such training?
- How do you feel about the referral system for physiotherapy? Tell me about your professional authority in your working place?
- What do you think about doctor's understanding for physiotherapist role in health system?
- What do you think when it comes to demand for physiotherapy services? Tell me also about the reception of physiotherapy service among the Tamilnadu people?
- Do you see immoral activities taking place in your profession? If yes, what could be the reasons for those?
- What do you feel about government's action towards improving your profession in Tamilnadu?
- What suggestions would you like to give to the government officials to improve it from here?

Appendix 2: **Informants background Information:**

Informants	Graduated educational institution	Working sector	Experience in the present working sector alone
Informant 1	Private college - Government university	Business	1.2 years in physiotherapy 4 years Business sector
Informant 2	Government college - Government university	Government hospital	37 years
Informant 3	Private university	Private hospital	2 years
Informant 4	Private college - Government university	Fitness center	1.5 years
Informant 5	Private university	Private home visits, Private clinic	2.2 years

Appendix 3: Example of analysis from transcript to category

The category is worsening of physiotherapy profession:

Transcript (translated)	Codes	Subcategories
"These days' private colleges are in a situation to close their PT department. This is because the student admission dropped down. Everyone came to know physiotherapy profession doesn't have a scope at all. Students not interested to join this programme. Those who opt this programme have opted with ignorance about the scope. No one joins with interest presently". (Participant-1) "As the students have no jobs placements, they struggle for a job after completion, the admission for PT programme reduced heavily in all institutions. So they start to give importance to other programmes they run for which there is good scope. Presently, most of the institutions which run PT programmes are about to close the department. Some have temporarily closed the department." (Participant-2)	Closing private colleges, Dropping admissions, Aware of poor scope, Uninterested high school graduates, Ignorantly selected profession, Uninterested programme option No job placements, job struggle, Heavily reduced admissions, Uninterested college administration, Closing PT departments, Temporary stop in college admissions.	Fall in college admissions
"From what I saw, only 30% continue their profession after graduation, the rest of them works in other profession. They go medical coding or completely very	Few continue PT profession, Many opted other professions, Medical coding preferred, Opting non-medical	

different profession or else to business." (Participant-1) As I told you before, only 10 friends are continuing now in PT profession and the rest 50 friends of my batch are now working in medical coding. They give a good salary for us at least. Those who work in medical coding and BPO with UG education earn a lot than a PT with PG education. They earn 18000 to 20000 as basic salary per month. So the PT's prefer to go to medical coding leaving PTP. Now more than half of PT's prefer working in some other profession and only a few work in small PT clinics, hospitals etc. One of my senior have went to study graphics designing after graduating UG in PT for a good future. If you see the reason, it is the money. We PT's don't have a good salary here in our field. (I-3)	professions, Opting business. Very few continues profession, Many opted medical coding, Well paid medical coding, Satisfying salary, Comparatively less paid PT jobs, Preferred medical coding jobs, Majority discontinued PT profession, Opted computer profession, good scope in computer profession, Money oriented profession preference, Less paid PT jobs.	High discontinuation of profession
"Those who continue the profession is very less these days. It is a lot. They try to withstand first in PTP after graduation for 2 – 3 years and when they find that there is no way they can improve in this profession , they leave it and decide for other profession." (Participant-5)	Very few continues PT , Initially patient for development, aware of poor career, Discontinues PT profession, Opts other professions	

"Because PT's are less skilled, they cannot show much improvement for patients. They don't give relevant therapy. Many don't have a good skill to diagnose and don't give appropriate therapy" (Participantl-1) "PT'S generally use electrotherapy techniques which don't give good results. In fact, it is causing some complication for the patient and not well received by the people. This gives a very poor perception to PTS and the profession is not good there. Also not many PT's are highly skilled and they don't give good treatment to patients also."(Participant-5)	Less skilled PT's, Provides irrelevant therapy, Produce less patient improvement, Insufficient diagnostic skills, High use of electrotherapy, Produces complication for patient, Unaccepted electrotherapy, Poor people perception , Poor PT profession, Insufficiently skilled PT's, Less effective treatment,	Harmful and less effective service
"If you look at a private clinic owned by PT's, it is they who use more modalities and more sessions for patients unnecessarily for making money." (Participant-1) "There are therapists who stretch therapy for making money. In situations, where only 4 days is sufficient to treat, they initially give one modality through which they give some relief to make patient continue with slow prognosis, followed by keep changing modalities or adding modalities to relieve pain slowly. Only	Supplier induced demand, Unnecessary modalities usage, Unnecessary induce follow-ups Induce demand for money, Slows down prognosis, Delay relevant therapy, Induce many follow-ups, Earns money from people ignorance	Asymmetry of information and Immoral therapists

after many days they start teaching exercise. They do it cleverly to have many follow-ups and make money. We are making money out of their ignorance." (Participant-3) "Also there are cases, where the PT'S who can treat patient conservatively for their condition will refer the patients to a surgeon and earn some percentage for referring the patient." (Participant-5)	Untreated patients for more income, PT's induce surgery demand, Earns money for referral,	
'In Tamil Nadu physiotherapists have no talent, colleges are private and only 2 government colleges are there. Teachers in private colleges won't teach good and those who graduated don't have good knowledge. So, the physiotherapy profession is down. Nothing good to talk about it (Frustration)." (Participant-1) Everyone wants to get a good job, good salary after college education. Here we PT's get only Indian Rupees (INR) 3,500 as monthly salary after completion in a private hospital. But for any other small jobs other than our profession who are graduates are paid INR 6000.How can we manage this for our living.(Frustration)	Untalented PT's, Majority private colleges, Insufficient transfer of knowledge, Insufficient PT's knowledge, Down PT profession, Frustration Expects well paid job, PT' paid worst, Other profession paid good, Struggle for survival,	Unhappy and frustrated professionals

According to me what I have seen or came to know from other PT's is the profession not good in TN. (unhappy) (Participant-1) "There are no jobs posted in hospitals. There are a lot of drawbacks like this in TN (frustration). They don't give more importance. They speak a lot but do nothing for us. When there is a vacancy, they don't take initiative to fill those (unhappy)."(Participant-2)	Frustration, Poorly faring PT profession, Unhappy Poor employment opportunities, Huge drawbacks in profession, Frustration, No importance for PTS, Governments poor commitment, Unfilled job positions, Unhappy	

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